

AMENDMENTS TO THE CLAIMS

The following listing of claims shows the status of every claim that is, or ever was, in the instant application. This listing will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1 - 44 (previously canceled).

45 (currently amended). A method for augmenting at least one function of a targeted biologic structure, which comprises targeting the biologic structure by ~~inducing~~ applying to the biologic structure at least one substantially complete acoustic signature of the biologic structure to induce acoustic resonance in the biologic structure.

46 (currently canceled).

47 (currently canceled).

48 (currently canceled).

49 (currently amended). ~~The method of claim 45, wherein said inducing comprises applying A~~ method for augmenting at least one function of a targeted biologic structure, which comprises targeting the biologic structure by providing to the biologic structure at least one resonant acousto-EM energy of the biologic structure.

50 (currently amended). The method of claim 49, wherein said ~~applying~~ providing comprises applying at least a portion of an acousto-EM signature of the biologic structure.

51 (currently amended). The method of claim 49, wherein said ~~applying~~ providing comprises applying at least one substantially complete acousto-EM signature of the biologic structure.

52 (currently amended). The method of claim ~~[[46]]~~ 45, wherein said ~~applying-occurs~~ providing comprises applying resonant acousto-EM energy at a sufficient power intensity to augment at least one function of the biologic structure, said at least one function being selected from the group of functions consisting of growth, reproduction, regeneration, embryogenesis, metabolism, fermentation, germination, oxidation or reduction activity and wound healing.

53 (currently amended). The method of claim 49, wherein said ~~applying~~ providing occurs at a sufficient power intensity to augment at least one function of the biologic structure, said at least one function being selected from the group of functions consisting of growth, reproduction, regeneration,

embryogenesis, metabolism, fermentation, germination, oxidation activity, or reduction activity and wound healing.

54 (currently amended). ~~The method of claim 45, wherein said biologic structure comprises A~~ method for augmenting at least one function of at least one structure selected from the group of structures consisting of organs, and organisms, which augmenting comprises targeting said at least one structure by inducing acoustic resonance therein.

55 (previously presented). The method of claim 45, wherein said biologic structure comprises at least one structure selected from the group of structures consisting of virus, bacteria, fungi, tissue masses, worms, arthropods, chitins, plants, animals, microorganisms, multicellular organisms, protozoa, liver, muscle, feet, brain, kidney, spleen, blood, lung, lens of eye, aqueous humor, vitreous humor, animal cell, plant cell, proteins, molecules, cell wall, capsule, spore, pili, plasma membrane, organ, portions of structures, components of structures, flagellum, cytoplasmic inclusion body, basal body, parasite, appendages, skin, shell, egg, cement/cement plate, bone, DNA, RNA, carbohydrates, lipids, lipopolysaccharides, glycolipids, glycoproteins, proteoglycans, chloroplasts, mitochondria, endoplasmic reticulum, endotoxins, exotoxins, proteases and ligands for host cell receptors.

56 (currently amended). The method of claim 46 45, wherein said biologic structure comprises at least one structure selected from the group of structures consisting of virus, bacteria, fungi, tissue masses, worms, arthropods, chitins, plants, animals, microorganisms, multicellular organisms, protozoa, liver, muscle, feet, brain, kidney, spleen, lung, lens of eye, aqueous humor, vitreous humor, plant cell, proteins, molecules, cell wall, capsule, spore, pili, plasma membrane, organ, portions of structures, components of structures, flagellum, cytoplasmic inclusion body, basal body, parasite, appendages, skin, shell, egg, cement/cement plate, bone, DNA, RNA, carbohydrates, lipids, lipopolysaccharides, glycolipids, glycoproteins, proteoglycans, chloroplasts, mitochondria, endoplasmic reticulum, endotoxins, exotoxins, proteases and ligands for host cell receptors.

57 (previously presented). The method of claim 49, wherein said biologic structure comprises at least one structure selected from the group of structures consisting of virus, bacteria, fungi, tissue masses, worms, arthropods, chitins, plants, animals, microorganisms, multicellular organisms, protozoa, liver, muscle, feet, brain, kidney, spleen, lung, lens of eye, aqueous humor, vitreous humor, plant cell, proteins, molecules, cell wall, capsule, spore, pili, plasma membrane, organ, portions of structures, components of structures, flagellum, cytoplasmic inclusion body, basal body, parasite, appendages, skin, shell, egg, cement/cement plate, bone, DNA, RNA, carbohydrates, lipids,

lipopolysaccharides, glycolipids, glycoproteins, proteoglycans, chloroplasts, mitochondria, endoplasmic reticulum, endotoxins, exotoxins, proteases and ligands for host cell receptors.

58 (currently amended). A method for augmenting at least one function of a targeted biologic structure selected from the group consisting of organs and organisms, which comprises targeting the biologic structure by inducing acoustic resonance in the biologic structure with select frequencies that augment the targeted biologic structure but have no substantial deleterious effect on nearby, non-resonating structures.

59-83 (previously canceled).

84 (currently amended). ~~The method of claim 45, further comprising~~ A method for augmenting at least one function of a targeted biologic structure which comprises:

- a) detecting at least one signature of the targeted biologic;
- b) comparing said at least one signature to at least one reference signature; and
- c) targeting the biologic structure by inducing acoustic resonance in the biologic structure.

85-104 (previously canceled).

105 (currently amended). A system for inducing targeted acoustic resonance in a biologic structure to augment at least one function of the biologic structure comprising:

- a) means for ~~generating~~ providing to the biologic structure at least one ~~targeted acoustic signal resonant acousto-EM signature of the biologic structure.~~
- ~~b) means for transmitting said at least one targeted acoustic signal to the biologic structure;~~
- ~~and~~
- ~~c) means for controlling the power level of said at least one targeted acoustic signal to augment at least one function of the biologic structure.~~

106-121 (previously canceled).

122 (previously presented). A method for augmenting the growth of an aquatic species comprising:

- a) determining at least one first resonant frequency of said aquatic species; and

- b) applying said at least one first resonant frequency at a sufficient power intensity to cause said augmenting to occur.

123 (previously presented). The method of claim 122, wherein said determining comprises measuring acoustic resonance frequency profiles.

124 (previously presented). The method of claim 123, wherein said measuring comprises transmitting acoustic energy to said aquatic species with at least one transducer.

125 (currently amended). The method of claim 124, wherein said ~~contacting~~ determining comprises placing said aquatic species adjacent said at least one transducer and scanning said aquatic species with a range of acoustic frequencies.

126 (previously presented). The method of claim 122, further comprising determining at least one second resonant frequency of said aquatic species; and applying said at least one second resonant frequency at a sufficient power intensity to cause further augmenting to occur.

127 (previously presented). The method of claim 126, wherein said at least one second resonant frequency is applied at a later point in time after said aquatic species has grown in size.

128 (previously presented). The method of claim 122, wherein said applying comprises placing at least one transducer in communication with said aquatic species.

129 (previously presented). The method of claim 128, wherein said at least one transducer is placed in at least one wall of an enclosure that contains said aquatic species.

130 (previously presented). The method of claim 122, wherein said augmenting the growth comprises at least one of increasing survivability and increasing growth rate.

131 (previously presented). The method of claim 122, wherein said augmenting comprises increasing survivability and increasing growth rate.

132 (previously allowed). A method for augmenting the growth of an aquatic species comprising:

- a) determining at least one first acoustic resonance frequency profile of said aquatic species;
- b) applying at least a portion of said first acoustic resonance frequency profile at a sufficient power intensity to cause said augmenting to occur;
- c) determining and applying at least one second acoustic resonance frequency profile by substantially repeating the steps a) and b) above at a point in time after said aquatic species has grown in size; and
- d) repeating step c) to achieve additional augmentation of said aquatic species.

133 (previously presented). The method of claim 122, wherein said aquatic species comprises at least one fish.

134 (previously presented). The method of claim 133, wherein said at least one fish comprises small-fry.

135 (previously presented). The method of claim 122, wherein said at least one fish comprises a plurality of fish contained within an enclosure.

136 (currently amended). A method for augmenting the growth of a plant species comprising;

- a) determining at least one first resonant acoustic frequency of said plant species by utilizing a frequency sweeping process; and
- b) applying said at least one first resonant acoustic frequency at a sufficient power intensity to cause said augmenting to occur.

137 (currently canceled).

138 (currently amended). The method of claim ~~137~~ 136, wherein said frequency sweeping process comprises utilizing at least one transducer and at least one signal generator.

139 (previously presented). The method of claim 136, wherein said augmenting the growth comprises at least one of enhancing germination and increasing growth rate.

140 (currently amended). ~~The method of claim 136, wherein said augmenting the growth comprises enhancing generation and increasing growth rate.~~ A method for enhancing germination of a plant species comprising:

- a) determining at least one first resonant acoustic frequency of said plant species by utilizing a frequency sweeping process; and
- b) applying said at least one first resonant frequency at a sufficient power intensity to cause said enhanced germination.

141 (previously presented). The method of claim 136, wherein said applying comprises placing at least one transducer in communication with said plant species.

142 (currently amended). ~~The method of claim 45, wherein said inducing comprises~~ A method for enhancing growth of a targeted biologic structure which comprises targeting the biologic structure by applying at least one substantially complete acousto-EM signature of the biologic structure and wherein said augmenting comprises growth of the biologic structure. to achieve acoustic resonance in the biologic structure.

143 (newly added). The method of claim 54, wherein said group of structures consisting of organs and organisms comprises at least one member selected from the group consisting of virus, bacteria, fungi, tissue masses, worms, arthropods, chitins, plants, animals, microorganisms, multicellular organisms, protozoa, liver, muscle, feet, brain, kidney, spleen, blood, lung, lens of eye, aqueous humor, vitreous humor, animal cell, plant cell, proteins, molecules, cell wall, capsule, spore,

pili, plasma membrane, organ, portions of structures, components of structures, flagellum, cytoplasmic inclusion body, basal body, parasite, appendages, skin, shell, egg, cement/cement plate, bone, DNA, RNA, carbohydrates, lipids, lipopolysaccharides, glycolipids, glycoproteins, proteoglycans, chloroplasts, mitochondria, endoplasmic reticulum, endotoxins, exotoxins, proteases and ligands for host cell receptors.

144 (newly added). The method of claim 58, wherein said group of structures consisting of organs and organisms comprises at least one member selected from the group consisting of virus, bacteria, fungi, tissue masses, worms, arthropods, chitins, plants, animals, microorganisms, multicellular organisms, protozoa, liver, muscle, feet, brain, kidney, spleen, blood, lung, lens of eye, aqueous humor, vitreous humor, animal cell, plant cell, proteins, molecules, cell wall, capsule, spore, pili, plasma membrane, organ, portions of structures, components of structures, flagellum, cytoplasmic inclusion body, basal body, parasite, appendages, skin, shell, egg, cement/cement plate, bone, DNA, RNA, carbohydrates, lipids, lipopolysaccharides, glycolipids, glycoproteins, proteoglycans, chloroplasts, mitochondria, endoplasmic reticulum, endotoxins, exotoxins, proteases and ligands for host cell receptors.

145 (newly added). The method of claim 84, wherein said biologic structure comprises at least one structure selected from the group of structures consisting of virus, bacteria, fungi, tissue masses, worms, arthropods, chitins, plants, animals, microorganisms, multicellular organisms, protozoa, liver, muscle, feet, brain, kidney, spleen, blood, lung, lens of eye, aqueous humor, vitreous humor, animal cell, plant cell, proteins, molecules, cell wall, capsule, spore, pili, plasma membrane, organ, portions of structures, components of structures, flagellum, cytoplasmic inclusion body, basal body, parasite, appendages, skin, shell, egg, cement/cement plate, bone, DNA, RNA, carbohydrates, lipids, lipopolysaccharides, glycolipids, glycoproteins, proteoglycans, chloroplasts, mitochondria, endoplasmic reticulum, endotoxins, exotoxins, proteases and ligands for host cell receptors.

146 (newly added). A method for augmenting the growth of an aquatic species comprising: utilizing at least one acoustic transducer to transmit to said aquatic species at least one first resonant acoustic frequency of said aquatic species, said at least one acoustic transducer operating at a sufficient power intensity to cause said augmenting to occur.

147 (newly added). The method of claim 146, further comprising transmitting at least one second resonant frequency of said aquatic species at a sufficient power intensity to cause further augmenting to occur.

148 (newly added). The method of claim 132, wherein said aquatic species comprises at least one fish.

149 (newly added). The method of claim 148, wherein said at least one fish comprises small-fry.

150 (newly added). The method of claim 148, wherein said at least one fish comprises a plurality of fish contained within an enclosure.